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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/936,559	09/24/1997	JING-LU GU	M-5176-US	9875

36257 7590 05/19/2004

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EXAMINER

GRIER, LAURA A

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 05/19/2004

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/936,559

Applicant(s)

GU, JING-LU

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-9, 11, 12 and 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-9, 11, 12, 17-27 and 29-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The indicated allowability of claim 12 is withdrawn.

2. ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 4, 17, 29-31, 34, 36** are rejected under 35 U.S.C. 102(b) as being anticipated by Henderson.

Regarding **claims 4 and 34**, Henderson discloses a dialer programming system and device with integrated printing process. Henderson's disclosure comprises an integrated circuit that includes a speaker for sound input and output (col. 15, lines 30-52 and figure 5), a digital record/playback circuit with memory circuit, indicative of a functional unit (col. 15, lines 42-43), wherein based upon whether a switch is closed or not to indicate different levels of sound pressure, inherently indicates that the activation of the functional unit is based upon an exceeding threshold level of an input signal.

Regarding **claim 17**, Henderson discloses a dialer programming system and device with integrated printing process. Henderson's disclosure comprises an integrated circuit that includes a speaker for sound input and output (col. 15, lines 30-52 and figure 5) coupled to inputs/output pins of an integrated circuit, a digital record/playback circuit (sound processing circuit) with

Art Unit: 2644

memory circuit and as well the record circuit reads on a write circuit and the playback circuit reads on a read circuit, which indicates functional units for generating a signal to output and inputting a signal to memory.

Regarding **claims 29 and 33**, Henderson discloses a dialer programming system and device with integrated printing process. Henderson's disclosure comprises an integrated circuit that includes a speaker for sound input and output (col. 15, lines 30-52 and figure 5) coupled to inputs/output pins of an integrated circuit, a digital record/playback circuit (sound processing circuit) with memory circuit and as well the record circuit reads on a write circuit and the playback circuit reads on a read circuit, which indicates functional units for generating a signal to output and inputting a signal to memory, wherein based upon whether a switch is closed or not to indicate different levels of sound pressure, inherently indicates that the activation of the functional unit is based upon an exceeding threshold level of an input signal.

Regarding **claim 30-31**, Henderson discloses everything claimed as applied above (see claim 29). Henderson means of memory are indicative of non-volatile memory cells and provides analog values.

Regarding **claim 36**, Henderson discloses everything claimed as applied above (see claim 34). Henderson's integrated circuit indicates the speaker can be used as both an input/output transducer, wherein the input/output of the transducer is coupled to pins of the integrated circuits, which indicates a bi-directional input/output.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. ***Claims 5-6 and 8-9*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson in view Bobry.

Regarding **claim 5**, Henderson. discloses everything claimed as applied above (see claim 4). However, Henderson fails to specifically disclose access circuitry. The examiner maintains that such components were well known in the art.

Regard the access circuitry and a converter, in a similar field of endeavor, Bobry discloses a microprocessor 42 (access circuitry) is capable reading stored digital audio from a memory 46 in Fig. 14. Column 14, lines 36-37. The digital signal is then applied to the D/A converter 176. The output of the D/A converter 176 is an analog signal which is then amplified by an amplifier 178 to an appropriate level and applied to the transducer (column 14, lines 35-41).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Henderson by incorporating an access circuitry such a microprocessor and an D/A converter for the purpose of having the capability of retrieving audio data (digital) from a memory means and thus enabling the conversion of a digital signal to an analog signal for adequate form to further the signal drive by an amplifier to the speaker.

Regarding **claims 6 and 25** Henderson and Bobry discloses everything claimed as applied above (see claim 5). Bobry discloses everything claimed as applied above (see claim 5). When transducer 170, its signal may be boosted to an appropriate level by the amplifier 172, the output of which is applied to the A/D converter 174. The A/D converter 174 converts the analog signal into digital form, which can be stored in memory 46 by the microprocessor 42. Column 14, lines 30-35.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Henderson by incorporating A/D converter and amplifier for the purpose enabling the conversion of an analog signal to a digital signal for adequate form to further drive the signal by an amplifier to the speaker.

Regarding **claim 8**, it is interpreted as a combination of claims 4 and 5, and thus rejected for the same reasons set forth above.

Regarding **claims 9 and 26**, it is interpreted as a claim 6, and thus rejected for the same reasons set forth above.

Regarding **claim 27**, it is interpreted as 26, and thus rejected for the same reasons set forth above.

6. **Claims 11-12, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson.

Regarding **claims 11 and 12**, Henderson discloses everything claimed (see claim 4). However, Henderson fails to specifically disclose a three pin package as claimed. The use of a

Art Unit: 2644

3 pin (IC) package, such as a T092 package for containing only a few components is commonly used in the art. However, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Henderson by incorporating a three pin package (T092) for the purpose of obvious coupling only a speaker, a power supply and another to ground, for the purpose of providing high quality audio capabilities.

Regarding **claim 19**, Henderson. discloses everything claimed (see claim 17). However, Henderson fails to specifically discloses a three pin package as claimed. The use of a 3 pin (IC) package, such as a T092 package for containing only a few components is commonly used in the art. However, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Henderson by incorporating a three pin package (T092) for the purpose of obvious coupling only a speaker, a power supply and another to ground, for the purpose of providing high quality audio capabilities.

7. **Claim 32** is rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson in view of applicant's admitted prior art (AAPA).

Regarding **claim 32**, Henderson, fails to specifically disclose the memory as FLASH EEPROM memory. The takes official notice of the fact that FLASH EEPROM memory is well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Henderson and AAPA by implementing the use of a FLASH EPROM memory for the purpose of enabling reprogramming and stable storage for long

periods of time, wherein the use of FLASH EEPROM memory is one of the well known memory techniques in the art of storing information signals (e.g., audio).

8. **Claims 20 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson in view of Willy.

Regarding claims 20 and 22, Henderson discloses a dialer programming system and device with integrated printing process. Henderson's disclosure comprises an integrated circuit that includes a speaker for sound input and output (col. 15, lines 30-52 and figure 5), a digital record/playback circuit with memory circuit, indicative of a functional unit (col. 15, lines 42-43), wherein based upon whether a switch is closed or not to indicate different levels of sound pressure, inherently indicates that the activation of the functional unit is based upon an exceeding threshold level of an input signal.

Willy discloses an improved "electromagnetic transducer that can function as either a speaker, a microphone, or a control device". Column 3 lines 3-6. In its application of a control device, tabs 124 (Figs. 19 and 20) provide bearing surfaces for armatures 116 and 118. Movement of these armatures, by touching, for example, produces electrical control responses from the speaker. Column 9 lines 44 through column 10, line 14.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the transducer taught by Willy in the audio device of Henderson because using this transducer would allow a greater degree of flexibility in controlling the device without increasing the number of input/output ports required.

Regarding **claim 23**, Henderson discloses everything claimed as applied above (see claim 20). Henderson's integrated circuit indicates the speaker can be used as both an input/output

transducer, wherein the input/output of the transducer is coupled to pins of the integrated circuits, which indicates a bi-directional input/output.

9. **Claims 7, 18, and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson in view of Thompson.

Regarding **claims 7, 18, and 24**, Henderson disclose everything claimed as applied above (see claim 4). Thompson discloses a delay circuit (figure 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Henderson by implementing a time delay circuit for the purpose enabling an activation signal for selected extent of time (col. 4, 1st paragraph).

Claim 21 and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson in view of Willy.

Henderson discloses everything claimed as applied above (see claim 20 and 34, respectively). Willy discloses an improved "electromagnetic transducer that can function as either a speaker, a microphone, or a control device". Column 3 lines 3-6. In its application of a control device, tabs 124 (Figs. 19 and 20) provide bearing surfaces for armatures 116 and 118. Movement of these armatures, by touching, for example, produces electrical control responses from the speaker. Column 9 lines 44 through column 10, line 14.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the transducer taught by Willy in the audio device of Henderson because using this transducer would allow a greater degree of flexibility in controlling the device without increasing the number of input/output ports required.

Allowable Subject Matter

10. Claim 28 is allowed.

Response to Arguments

11. Applicant's arguments with respect to claims 4-9, 11-12, 17-27, and 29-36 have been considered but are moot in view of the new ground(s) of rejection.

The applicant's arguments are basically directed the prior art of Yekutiely failing to teach a single bidirectional input/output pin. The Yekutiely reference has been removed. The rejection of the above mentioned claim is based primary on the Henderson reference, which teaches a speaker coupled to an integrated circuit, wherein the speaker acts as both an input and output transducer which upon activation of the speaker for either function, an sound either output or record by the memory located on the integrated circuit. Finally, in respect to the input/output pin, in the independent claims, the language fails to explicitly limit the input/output pin to only a single pin.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

Art Unit: 2644

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

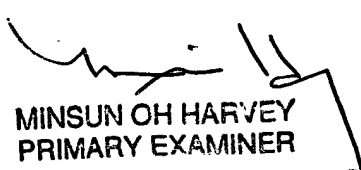
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG

May 17, 2004


MINSUN OH HARVEY
PRIMARY EXAMINER